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## EDITORIAL

Impact factor and its role in academic promotion<sup>☆</sup>

In our collective experience as editors of international peer-reviewed journals, we propose that the impact factor calculated for individual journals should not be used as a basis for evaluating the significance of an individual scientist's past performance or scientific potential. There are several reasons not to equate the impact factor of a journal in which the scientist publishes with the quality of the scientist's research. For example, as revealed by several recently published analyses of the impact factor<sup>1–6</sup>:

- A journal's impact factor is determined by a decided minority of its published manuscripts. Thus the impact factor correlates poorly with the citations of an individual manuscript.
- The impact factor does not consider the number of scientists actively producing research in a given specialty field. Indeed, some journals feel the need to serve constituencies with relatively small numbers of participants who continue to address important questions even though the number of scientists available for citations is limited.
- A journal's impact factor can be inflated by certain journal practices such as publication of many review articles.
- Impact factor measures only the frequency of citations which cannot be assumed to always equate with quality.

There are alternatives and we believe more valid measures of the quality and impact of an individual scientist's published contributions. First, a citation record for the *individual candidate* is readily available via several types of Internet search engines. Second, the time-honored practice of soliciting evaluations concerning the significance of a candidate's work from scientific peers who are carefully selected to be both highly qualified as well as clearly "arms-length" from the candidate should be rigorously applied.

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